ELEC 364 – Photonics Measurement - Spring 2016

Instructor: Dr. Tim Noe
Office: Abercrombie, Room 127
E-mail: timnoe@rice.edu

Overview

After completing this course, students will have the knowledge and experimental skills to design and apply a photonic measurement system to monitor an environment, process, device, or system. The course will combine predefined labs to develop skills with application projects.

Course Schedule

This schedule is tentative and may be updated as the semester goes along.

Week	Dates	Subjects	Comments
1	Jan. 12, 14	Intro / Lab 1	Geom. Optics
2	Jan. 19, 21	Lab 2	Thin Lens
3	Jan. 26, 28	Lab 3	Telescopes
4	Feb. 2, 4	Lab 4	Diffraction
5	Feb. 9, 11	Lab 5	Diffr./Interference
6	Feb. 16, 18	Lab 6	Michelson Inter.
7	Feb. 23, 25	Lab 7	Lasers/Coherence
	Week of Feb. 29th		
8	Mar. 8, 10	Lab 8	Polariz. Of Light
9	Mar. 15, 18	Lab 9	Birefringence
10	Mar. 22, 24	Lab 10	Abbe Th. Imaging
11	Mar. 29	Prisms/Gratings	Diffr. Elements
12	Apr. 5, 7	Build Monochrom.	Opt. System
13	Apr. 12, 14	Lock-In Amp/Camera	Measurement Tools
14	Apr. 19, 21	GaAs Transmission	Measurement Tech.

Textbook

There is no required textbook for the course but you will need a lab notebook; I suggest a small composition notebook. Optionally: you can purchase the *Projects in Optics Workbook* from Newport.

Assignments
You will be graded weekly for your lab notebook assignments. To be turned in Friday the week of the lab and returned by the next class period.

Office Hours
Office hours will be held in Abercrombie A127, time TBD. You are *strongly* encouraged to take advantage of office hours, especially if you are having difficulty with the lab assignments. Additional office hours may be scheduled by appointment. Email to make an appointment. ***Please* take advantage of this**.

Exams
There will be no exams for this class as it is a hands-on laboratory course.

Grading Policy
Your final grade will be determined according to the following weights:

- Laboratory Assignments: 100%

There will be NO exams.

Please note that this class will NOT be graded on a curve. It is possible for everybody in the class to get an A (or an F). Your grade has no influence on anybody else's grade.

Graders

Fumiya Katsutani (katsutani@rice.edu) will grade the laboratory assignments

Policy on teaming: It is obvious that you will be working in groups for the lab assignments. Therefore, working together in groups to complete the lab assignments is reasonable. However, the point of the laboratory projects is to give you hands-on experience working in optics not about copying lab results without getting your hands dirty. Direct copying of data and lab notes provided by another student (or from any other source) is therefore a violation of the Honor Code, and is strictly forbidden.

Regrade policy: If you think a regrade is required on any assignment, you should make an appointment with me AS SOON AS POSSIBLE, but not more than one week after the assignment was returned to you. Except in the event of obvious clerical errors, NO regrades will be considered beyond this deadline. It is YOUR responsibility to examine your graded work carefully to check for any grading errors.

Late assignments: If you have a LEGITIMATE and FORSEEABLE excuse for handing in an assignment late, you will receive permission to do so with no penalty. These situations will be handled on a case-by-case basis. Note that a legitimate excuse such as a medical situation requires a confirming note from your physician. If you do not fall into the aforementioned category, then you can still receive 50% credit on late assignments, as long as I receive them no later than two weeks after the original due date. Assignments turned in later than that will receive 25% credit, up to the last day of class. The idea here is that, even if you cannot hand in an assignment on time, you still get some credit if you do it before the end of the semester. This is the Better Late Than Never clause. Obviously, using the homework solutions to complete a late assignment would defeat the whole purpose of this clause, so it is a violation of the Honor Code to do so.

Handicapped students

Any student with a documented disability needing academic adjustments or accommodations is requested to speak with me during the first two weeks of class. All discussions will remain confidential. Students with disabilities should also contact Disability Support Services in the Allen Center, at 348-5841.